

USSN:09/506,078  
Attorney Docket No: 3153.00205

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**AMENDED VERSION**

**IN THE CLAIMS:**

1. (Amended) A fusion protein for producing a dual immune response in a vertebrate, which fusion protein comprises:

(a) a first proteinaceous portion analogous to all or part of a peptide of known structure and function endogenously synthesized within the vertebrate, the activity of which peptide is to be inhibited within the vertebrate, and which proteinaceous portion by itself is incapable of eliciting an effective immunoinhibitory response in said vertebrate; connected to

(b) a second proteinaceous portion analogous to all or part of an immunogen from a pathogen, which pathogen is capable of pathogenically infecting the vertebrate;

the portion (b) causing the vertebrate's immune system to recognize the portion (a) and produce a response that:

(i) inhibits the activity of the peptide of known structure and function endogenously synthesized within the vertebrate; and

(ii) protects the vertebrate from known infection caused by the pathogen, when the vertebrate is vaccinated with an effective amount of the fusion protein.

3. (Amended) A fusion protein for producing an immune response in a vertebrate, which fusion protein comprises:

(a) a first proteinaceous portion analogous to all or part of a peptide of known structure and function, the activity of which is to be inhibited within the vertebrate, and which proteinaceous portion by itself is incapable of eliciting an effective immunoinhibitory response in the vertebrate; connected to

(b) a second proteinaceous portion analogous to all or part of a BHV-1 antigen;

the second proteinaceous portion (b) causing the vertebrate's immune system to recognize the first proteinaceous portion (a) and produce an

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immune response capable of inhibiting the activity of said peptide within the vertebrate when the vertebrate is vaccinated with an effective amount of the fusion protein

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11. (Twice Amended) A dual-function vaccine which comprises a fusion protein according to claim 1, a vector according to claim 7, or a transformed cell according to claim 10, in an amount effective to I) inhibit the activity of the peptide of known structure and function from which portion (a) of the fusion protein is derived, and II) to protect against known infection caused by the pathogen from which portion (b) of the fusion protein is derived; and a carrier acceptable for pharmaceutical or veterinary use.